



PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	FOR FURTHER see Notification (Form PCT/ISA/	of Transmittal of International Search Report (220) as well as, where applicable, item 5 below.
030844WO International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
international application vo.		
PCT/IB 03/04246	29/09/2003	
Applicant		•
NOKIA CORPORATION		
This International Search Report has b	een prepared by this International Searching Au	thority and is transmitted to the applicant
according to Article 18. A copy is being	transmitted to the International Bureau.	•
• •		
This International Search Report consi	sts of a total of sheets.	c report
X It is also accompanied	by a copy of each prior art document cited in this	i report.
D. C. of the pency!		
Basis of the report	he international search was carried out on the ba	sis of the international application in the
a. With regard to the language, a language in which it was filed,	unless otherwise indicated under this item.	
the international searc	h was carried out on the basis of a translation of	the international application furnished to this
Authority (Rule 23.1(b))).	ntornational application, the international search
was carried out on the basis of	the sequence listing :	nternational application, the international search
contained in the intern	ational application in written form.	
filed together with the	international application in computer readable for	m.
furnished subsequent	y to this Authority in written form.	
furnished subsequent	y to this Authority in computer readble form.	
the statement that the international application	subsequently furnished written sequence listing on as filed has been furnished.	does not go beyond the disclosure in the
the statement that the furnished	information recorded in computer readable form	is identical to the written sequence listing has been .
2. Certain claims were	found unsearchable (See Box I).	
3. Unity of invention is		
3		
4. With regard to the title,		
the text is approved as	s submitted by the applicant.	
the text has been esta	ablished by this Authority to read as follows:	
	•	
	·	
5. With regard to the abstract,		
Tall 12 1 1 1 1 an an array and as	s submitted by the applicant.	
the test been esta	ablished, according to Rule 38.2(b), by this Author to the date of mailing of this international search re	rity as it appears in Box III. The applicant may, port, submit comments to this Authority.
	oublished with the abstract is Figure No.	10
8. The righte of the drawings to be a		None of the figures.
	t failed to suggest a figure.	3
	etter characterizes the invention.	
Decause this righte be	Mor aries and are arrested to	



A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G11C27/02 H03H19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 $\begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{G11C} & \mbox{H03H} & \mbox{H03K} \\ \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

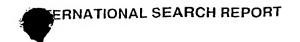
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC, WPI Data, PAJ

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01 24192 A (ERICSSON TELEFON AB L M) 5 April 2001 (2001-04-05) page 16, line 1 - line 28; figure 14B	1,2, 10-12
A	KARVONEN S ET AL: "A complex charge sampling scheme for complex IF receivers" PROCEEDINGS OF THE 2003 IEEE INTERNATIONAL SYMPOSIUM ON CIRCUITS AND SYSTEMS (CAT. NO.03CH37430), ISCAS 2003. INTERNATIONAL SYMPOSIUM ON CIRCUITS AND SYSTEMS, BANGKOK, THAILAND, 25-28 MAY 2003, pages II-169-72 vol.2, XP002278249 2003, Piscataway, NJ, USA, IEEE, USA ISBN: 0-7803-7761-3 the whole document	1,2,9-12
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X Further documents are listed in the continuation of box C.	X Patent family members are listed in annex.
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
27 April 2004	2 4 06 2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx: 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer BO GUSTAVSSON

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	tion) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Category °	Citation of document, with indication, where appropriate, or the relevant passages	Ciantino.
A	VASSEAUX T ET AL: "A track&hold-AGC suitable for downconversion by subsampling" ICECS'99. PROCEEDINGS OF ICECS '99. 6TH IEEE INTERNATIONAL CONFERENCE ON ELECTRONICS, CIRCUITS AND SYSTEMS (CAT. NO.99EX357), ICECS'99. PROCEEDINGS OF ICECS'99. 6TH IEEE INTERNATIONAL CONFERENCE ON ELECTRONICS, CIRCUITS AND SYSTEMS, PAFOS, CYPRUS, 5-, pages 1527-1530 vol.3, XP002278250 1999, Piscataway, NJ, USA, IEEE, USA ISBN: 0-7803-5682-9 the whole document	1,10,11
A	US 5 963 156 A (OPRIS ION E ET AL) 5 October 1999 (1999-10-05) the whole document	1,2, 10-12
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INTERNATIONAL SEARCH REPORT

formation on patent family members

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WO 0124192	A	05-04-2001	AU CN EP JP WO	7820100 A 1377504 T 1221166 A1 2003510933 T 0124192 A1	30-04-2001 30-10-2002 10-07-2002 18-03-2003 05-04-2001
US 5963156	Α	05-10-1999	NONE		